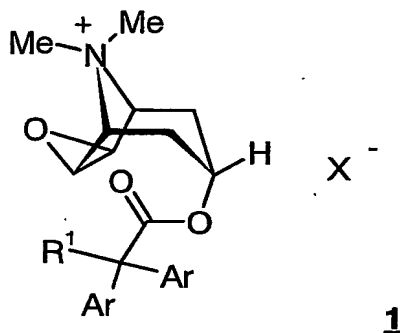


## Claims

1. Pharmaceutical composition, characterised in that it contains an anticholinergic of the formula 1



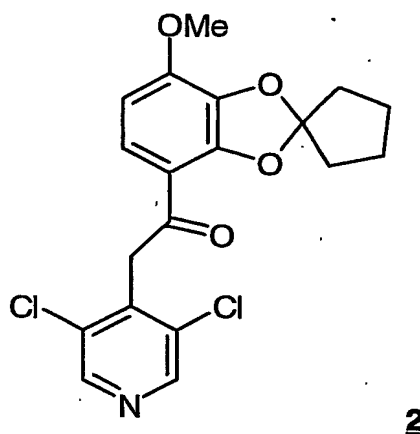
wherein

X<sup>-</sup> represents chlorine, bromine, iodine, methanesulphonate or trifluoromethanesulphonate;

R<sup>1</sup> represents hydroxy or methyl;

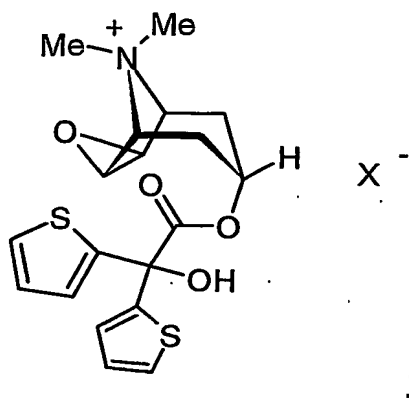
Ar represents phenyl or thienyl;

in combination with the compound of the formula 2



optionally in the form of a pharmacologically acceptable acid addition salt thereof, optionally in the form of a solvate or hydrate and optionally together with a pharmaceutically acceptable excipient.

2. Pharmaceutical composition according to claim 1, characterised in that the anticholinergic of the formula 1 is a compound of the formula 1a

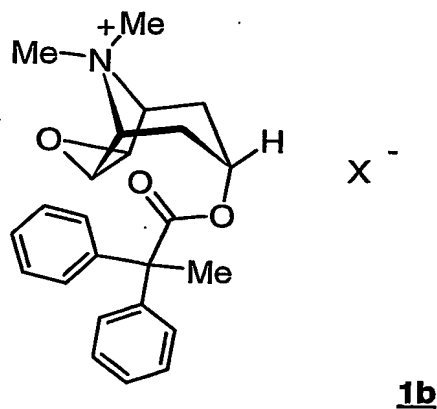


wherein

X<sup>-</sup> represents chlorine, bromine, iodine, methanesulphonate or trifluoromethanesulphonate,

optionally in the form of a pharmacologically acceptable acid addition salt thereof, optionally in the form of a solvate or hydrate and optionally together with a pharmaceutically acceptable excipient.

3. Pharmaceutical composition according to claim 2, characterised in that X represents bromine.
4. Pharmaceutical composition according to claim 1, characterised in that the anticholinergic of the formula **1** is a compound of the formula **1b**



wherein

X<sup>-</sup> represents chlorine, bromine, iodine, methanesulphonate or trifluoromethanesulphonate,

optionally in the form of a pharmacologically acceptable acid addition salt thereof, optionally in the form of a solvate or hydrate and optionally together with a pharmaceutically acceptable excipient.

5. Pharmaceutical composition according to claim 4, characterised in that X represents bromine.

6. Pharmaceutical composition according to one of claims 1 to 5, characterised in that the anticholinergic of the formula 1 and the compound of the formula 2 are present either together in a single formulation or in two separate formulations.

7. Pharmaceutical composition according to one of claims 1 to 6, characterised in that the weight ratios of the anticholinergic of the formula 1 to the compound of the formula 2 are in the range from 1:4000 to 8:1, preferably from 1:1000 to 1:1.2.

8. Pharmaceutical composition according to one of claims 2 to 6, characterised in that the weight ratios of the compound of the formula 1a to the compound of the formula 2 are in the range from 1:4000 to 1:2.5, preferably from 1:1000 to 1:12.5.

9. Pharmaceutical composition according to one of claims 4 to 6, characterised in that the weight ratios of the compound of the formula 1b to the compound of the formula 2 are in the range from 1:4000 to 8:1, preferably from 1:1000 to 1:1.2.

10. Pharmaceutical composition according to one of claims 1 to 9, characterised in that the total dosage per single dose of the combination of the anticholinergic of the formula 1 and the compound of the formula 2 is in the range of 25 to 10000  $\mu$ g, preferably from 100 to 5800  $\mu$ g.

11. Pharmaceutical composition according to one of claims 1 to 10, characterised in that it is in the form of a formulation suitable for inhalation.

12. Pharmaceutical composition according to claim 11, characterised in that it is a formulation selected from among inhalable powders, propellant-

containing metering aerosols and propellant-free inhalable solutions or suspensions.

13. Pharmaceutical composition according to claim 12, characterised in that it is an inhalable powder which contains the anticholinergic of the formula 1 and the compound of the formula 2 in admixture with suitable physiologically acceptable excipients selected from among the monosaccharides, disaccharides, oligo- and polysaccharides, cyclodextrines, polyalcohols, salts, or mixtures of these excipients with one another.

14. Inhalable powder according to claim 13, characterised in that the excipient has a maximum average particle size of up to 250  $\mu$ m, preferably between 10 and 150  $\mu$ m.

15. Pharmaceutical composition according to claim 12, characterised in that it is an inhalable powder which contains only the anticholinergic of the formula 1 and the compound of the formula 2 as its ingredients.

16. Pharmaceutical composition according to claim 12, characterised in that it is a propellant-containing inhalable aerosol which contains the anticholinergic of the formula 1 and the compound of the formula 2 in dissolved or dispersed form.

17. Pharmaceutical composition in the form of a propellant-containing inhalable aerosol according to claim 16, characterised in that it contains, as propellant gas, hydrocarbons such as n-propane, n-butane or isobutane or halohydrocarbons such as chlorinated and/or fluorinated derivatives of methane, ethane, propane, butane, cyclopropane or cyclobutane.

18. Pharmaceutical composition in the form of a propellant-containing inhalable aerosol according to claim 17, characterised in that the propellant gas is TG11, TG12, TG134a (1,1,1,2-tetrafluoroethane), TG227 (1,1,1,2,3,3,3-heptafluoropropane) or a mixture thereof.

19. Pharmaceutical composition according to claim 12, characterised in that it is a propellant-free inhalable solution or suspension which contains water, ethanol or a mixture of water and ethanol as solvent.

20. Pharmaceutical composition in the form of an inhalable solution or suspension according to claim 19, characterised in that the pH is 2 to 7, preferably 2 to 5.
21. Capsules, characterised in that they contain an inhalable powder according to claim 13 or 14.
22. Use of a capsule according to claim 15 in an inhaler, preferably in a Handyhaler.
23. Use of an inhalable solution according to one of claims 19 or 20 for nebulising in an inhaler, preferably according to WO 91/14468 or an inhaler as described according to the Figures 6a and 6b of WO 97/12687.
24. Use of a composition according to one of claims 1 to 20 for preparing a medicament for treating pulmonary diseases, in particular inflammatory or obstructive diseases of the respiratory tract.
25. A method of prophylaxis of, treating of, or reducing the exacerbations associated with pulmonary diseases by administering to a patient in need thereof an effective amount of a pharmaceutical composition according to one or more of the claims 1 to 20 either in a single combined form, separately, or separately and sequentially where the sequential administration is close in time, or remote in time.
26. The method according to claim 25 wherein the pulmonary disease is asthma, COPD, or another obstructive airways disease exacerbated by bronchial hyperreactivity and bronchospasm.
27. The method according to claim 25 or 26 wherein said administration by inhalation comprises simultaneous or sequential delivery of said combination of therapeutic agents, comprising the anticholinergic of the formula 1 and the compound of the formula 2, in the form of an aerosol or dry powder dispersion.
28. The method according to one or more of the claims 25 to 27, wherein the anticholinergic of the formula 1 is the compound of the formula 1a.

29. The method according to one or more of the claims 25 to 27, wherein the anticholinergic of the formula 1 is the compound of the formula 1b.
30. A package comprising a pharmaceutical composition according to one or more of the claims 1 to 22 for insertion into a device of simultaneous or sequential delivery of said pharmaceutical composition in the form of an aerosol or dry powder dispersion, to a mammal in need of treatment.
31. Inhaler comprising a pharmaceutical composition according to one or more of the claims 1 to 22 for simultaneous or sequential delivery of said pharmaceutical composition in the form of an aerosol or dry powder dispersion, to a mammal in need of treatment.
32. Pharmaceutical composition, characterised in that it contains an anticholinergic in combination with the compound of the formula 2 optionally in the form of a pharmacologically acceptable acid addition salt thereof, optionally in the form of a solvate or hydrate and optionally together with a pharmaceutically acceptable excipient.
33. An agent for prophylactic and/or therapeutic treatment of pulmonary diseases, in particular inflammatory or obstructive diseases of the respiratory tract, which comprises the pharmaceutical composition according to one of claims 1 to 20.
34. An agent for prophylactic and/or therapeutic treatment of pulmonary diseases, in particular inflammatory or obstructive diseases of the respiratory tract, which comprises the pharmaceutical composition according to one of claims 1 to 20 for administering either in a single combined form, separately, or separately and sequentially where the sequential administration is close in time, or remote in time.
35. The agent according to claim 34 wherein the pulmonary disease is asthma, COPD, or another obstructive airways disease exacerbated by bronchial hyperreactivity and bronchospasm.
36. The agent according to claims 33 to 35, wherein the anticholinergic of the formula 1 is the compound of the formula 1a.

37. The agent according to claims 33 to 35, wherein the anticholinergic of the formula **1** is the compound of the formula **1b**.